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## PATENT ABSTRACTS OF JAPAN

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(54) **VEHICULAR AUTOMATIC TRANSMISSION**

offers a forward ten-speed arrangement.

(57) Abstract:

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**PROBLEM TO BE SOLVED:** To increase the number of speeds of vehicular multi-speed automatic transmissions substantially, via minimal addition of engaging elements.

**SOLUTION:** This vehicular automatic transmission comprises a first input path T1 with a first fixed speed ratio to the rotation of an input shaft 11, a second input path T2 with a second fixed speed ratio to the rotation of the input shaft 11 differing from the first speed ratio, a four-element planetary gear set G consisting of a plurality of planetary gears in combination, the four elements of which are shown as the first to fourth elements in the order of their arrangement in the speed diagram, a first clutch C-1 and a third clutch C-3 for transmitting rotation from the second input path T2 to the first and fourth elements S3 and S2, a second clutch C-2 and a fourth clutch C-4 for transmitting rotation from the first input path T1 to the third and first elements C2, C3 and S3, a first brake B-1 and a second brake B-2 for locking the fourth and third elements S2 and C2, C3, and an output shaft 33 connected to the second element R2. This constitution

